

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. When strikethrough cannot easily be perceived, or when five or fewer characters are deleted, [[double brackets]] are used to show the deletion. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 5, 10 and 14, and CANCEL claims 2, 6, 9, 11-13 and 15-16 without prejudice or disclaimer in accordance with the following:

1. (Currently amended) A method for detecting in situ a DNA strand break, comprising ~~the steps of:~~
binding a PprA protein derived from *Deinococcus radiodurans* (SEQ ID NO: 1) ~~or a~~
fragment thereof to a DNA strand break; and
detecting in situ the PprA protein ~~or a fragment thereof~~ bound to the DNA strand break using an antibody or a fragment thereof which specifically binds to the PprA protein.
2. (Canceled)
- 3-4. (Canceled)
5. (Currently amended) A kit for detecting in situ a DNA strand break, comprising:
~~_____~~ an amount of PprA protein derived from *Deinococcus radiodurans* (SEQ ID NO: 1); ~~or a~~
fragment thereof and
~~_____~~ an antibody or a fragment thereof which specifically binds to the PprA protein ~~a means for~~
~~detecting the PprA protein or a fragment thereof.~~
6. (Canceled)
- 7-8. (Canceled)
9. (Canceled)
10. (Currently amended) The method for detecting in situ a DNA strand break according to ~~Claim 9~~ claim 1, wherein the antibody is a polyclonal antibody or a monoclonal antibody or the fragment thereof which is selected from the group consisting of Fab, F(ab')₂, and Fab'.

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Currently amended) The kit for detecting *in situ* a DNA strand break according to ~~Claim 13~~claim 5, wherein the antibody is a polyclonal antibody or a monoclonal antibody or the fragment thereof which is selected from the group consisting of Fab, F(ab')₂, and Fab'.

15. (Canceled)

16. (Canceled)